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A.D. 1859, 3rd SEPTEMBER. N° 2014.

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S P E C I F I C A T I O N

OF

WILLIAM SUFFIELD.

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MANUFACTURE OF ARTIFICIAL TEETH.

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LONDON:

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## Manufacture of Artificial Teeth.

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*(This Invention received Provisional Protection only.)*

**PROVISIONAL SPECIFICATION** left by William Suffield at the Office of the Commissioners of Patents, with his Petition, on the 3rd September 1859.

I, WILLIAM SUFFIELD, of Birmingham, in the County of Warwick, Dentist,  
5 do hereby declare the nature of the said Invention for “**IMPROVEMENTS IN THE MANUFACTURE OF ARTIFICIAL TEETH, AND IN MACHINERY TO BE EMPLOYED IN THE SAID MANUFACTURE,**” to be as follows:—

My said Invention consists in manufacturing artificial teeth from dry clay or other suitable materials, by means of the machinery herein-after described.  
10 The materials from which I manufacture the said teeth are of the kind ordinarily employed for the purpose, but I employ the said materials in a dry state, instead of making them into a plastic mass with water; or, I so far damp the powdered materials, or mix therewith so much powdered gum or other adhesive matter, as will cause the powder to cohere firmly under great pres-  
15 sure. The machinery I employ consists essentially of a fly press, the two tools constituting a mould of the form of the tooth to be manufactured. The upper tool works in the ordinary manner, but the lower tool, instead of being stationary as usual, is capable of being raised through a short range by the action of springs, which said springs are allowed to raise the lower tool, or are held  
20 in check by the action of a spring treadle. The lower tool has two holes, into which are dropped the platinum wires to be inserted in the tooth. The lower tool is partially raised for the insertion of the said wires, and then allowed to descend. The collar is filled or partly filled with the powder of

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*Suffield's Improvements in the Manufacture of Artificial Teeth, &c.*

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which the tooth is to be made, and the upper tool is brought down. After the upper tool has risen, the lower one is made to follow it, carrying the tooth formed. At the same time the wires in the tooth are pressed upwards from the holes in the lower die so as to avoid the risk of injuring the tooth by lifting it, and thereby withdrawing the wires. The raising of the wires is thus effected. In the lower tool are two rods, the upper small ends of which enter the holes in the said lower tool. The lower ends of the said rods rest on the end of a small lever carried by the cross piece on which the lower tool rests; as the lower tool rises the said cross piece comes against the top of the slot in which it works, and the free end of the lever is depressed. The end of the lever bearing the rods is thereby raised, and the wires fixed in the tooth are pushed from the holes in the lower tool. The teeth are burnt or fired in the usual manner. In modifying the machinery to make tube teeth, instead of teeth having pins inserted therein, I make the upper and lower dies meet by an equal motion in contrary directions, while the tube upon which the clay is compressed remains stationary. In making teeth with grooves in their sides, I employ two additional side dies which approach each other in a horizontal plane and form the said grooves. In making twin teeth and blocks, the working tools act in the same manner as in making single teeth, but the said tools have the forms necessary to produce twin teeth or blocks.

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Printers to the Queen's most Excellent Majesty. 1860.